

REMARKS**Information Disclosure Statement**

The Final Office Action contends that the Supplemental Information Disclosure Statement, filed April 10, 2007, fails to comply with the rules apparently because copies have not been provided of the documents that have been crossed through.

In response, Applicants note that a copy of each of the cited documents has been submitted with the Supplemental Information Disclosure Statement. Applicants submit herewith additional copies of each of the crossed through documents accompanied by a date-stamped mailroom receipt evidencing the filing of the crossed-through documents on April 10, 2007.

Moreover, Applicants submit herewith another copy of the completed Form PTO-1449 listing the crossed-through documents.

The Examiner is requested to forward an initialed copy of the form with the next communication from the Patent and Trademark Office.

Claim of Priority

Applicants express appreciation for the acknowledgment of the claim of foreign priority as well as receipt of the certified copy in this national stage application.

Response To Art-Based Rejections

The following rejections are set forth in the Final Office Action:

(a) Claims 1, 4 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,980,869 to Sanker et al. (hereinafter "Sanker").

(b) Claims 1 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu WO 01/17494 to Zhu (hereinafter “Zhu”) in view of U.S. Patent Application Publication No. US 2002/01561 30 A1 to Melman (hereinafter “Melman”).

(c) Claims 1 and 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over in Melman in view of JP 2000-239136 to Oriza (hereinafter “Oriza”).

(1) Response To Obviousness Rejection Based Upon Sanker

With respect to the obviousness rejection based upon Sanker, Applicants respectfully submit that the rejection is without appropriate basis and does not establish a *prima facie* case of obviousness. Moreover, Applicants submit that even if for the sake of argument a *prima facie* case of obviousness is considered to have been established, Applicants’ showing of unexpected results overcomes any *prima facie* case of obviousness.

The rejection contends that Sanker discloses dual phase oral compositions comprising plants and plant extracts, with the plants including blueberries and cranberries, which are asserted to comprise polyphenols. The rejection further contends that the second composition comprises the plant and also comprises an additional buffering agent, with the agents including glycolic acid and citric acid. The rejection recognizes that Sanker is not anticipatory insofar as one must “pick and choose” from different listed plants, plant extracts and acids. However, the Examiner is of the opinion that it would have been obvious in a self-evident manner to have selected cranberries from one list and glycolic acid from another, motivated by the unambiguous disclosure of each individually, and consistent with the basic principle of patent prosecution that a reference should be considered as expansively as is reasonable in determining the full scope of the contents within its four corners.

In response to this ground of rejection, Applicants submit that the rejection is without sufficient basis in relying upon the asserted standard of “it would have been obvious in a self-evident manner to have selected cranberries from one list and glycolic acid from another, motivated by the unambiguous disclosure of each individually, and consistent with the basic principle of patent prosecution that a reference should be considered as expansively as is reasonable in determining the full scope of the contents within its four corners”.

The Examiner is reminded that a rejection must establish that the claimed subject matter would have been obvious to one having ordinary skill in the art following the disclosure of the document utilized in the rejection, and must not rely upon Applicants’ disclosure to arrive at Applicants’ claimed subject matter.

In the instant situation, one having ordinary skill in the art would not pick and choose from amongst the various components disclosed in Sanker to arrive at Applicants’ claimed subject matter. For example, Sanker merely discloses beginning at the top column 6 that his oral compositions may each contain a buffering agent. Moreover, beginning at column 6, line 15, Sanker discloses that that, in addition to the plant or extract from the Ericascease family, an additional acidic compound can be added to further lower the pH, with only one of a list of numerous acids being glycolic acid. In fact, Sanker specifically discloses at column 6, beginning at line 28, that a blend of acids is preferred, with phosphoric acid, citric acid and malic acid being preferred. Still further, Sanker does not appear to disclose any examples that include glycolic acid.

Regarding the assertion that Sanker includes polyphenols because Sanker can contain plants and plant extracts including blueberries and cranberries, Applicants submit that Sanker discloses numerous plants and extracts. For example, Sanker discloses that his second oral

composition will include a plant species or its extract from the Ericaceae family, and that the Ericaceae (heath) family, consists of about 110 genera and 4,000 species. While Sanker discloses that preferred forms of the extracts from the family Ericaceae include cranberry juice concentrates, cranberry juice powder, and other forms of cranberry which can serve as a proton donor, there is no teaching or suggestion in Sanker of picking and choosing from a large number of plants and plant extracts and from the possible use of an acid to arrive at a composition including an agent for dissolving dental calculus, which comprises a polyphenol and glycolic acid as an active ingredient. There is no direction in Sanker to pick and choose a plant or plant extract that may possibly including polyphenols; and there is no direction in Sanker that glycolic acid should be combined with any specific plant or plant extract, let alone a plant or plant extract including polyphenols.

Accordingly, a *prima facie* case of obviousness has not been established. However, even if for the sake of argument a *prima facie* case of obviousness has been established, unexpected results associated with Applicants' claimed subject matter are further evidence of patentability of Applicants' claimed subject matter.

Applicants are submitting herewith a Declaration Under 37 C.F.R. 1.132 by one of the inventors, Kazuhiro ONO, which shows the unexpected advantages associated with recited combination of polyphenol and glycolic acid as compared to the individual use of polyphenol and glycol acid.

The Declaration establishes that as compared to examples using polyphenol or glycolic acid, i.e., Examples 3 and 18 of Applicants' originally filed application, respectively, an example using a combination of polyphenol and glycolic acid achieves unexpected advantages.

In particular, in Example 3 wherein *Perilla frutescens var. crispa* polyphenol was used in the absence of inclusion of additional active ingredient, 50% weight of the dental calculus was dissolved after 105 minutes, and in Example 18 wherein glycolic acid was used in the absence of inclusion of additional active ingredient, 44% weight of the dental calculus was dissolved after 9 minutes. In contrast, Applicants note that when polyphenol and glycolic acid were utilized in combination, there is obtained a more rapid dissolving of the dental calculus, i.e., 50% weight of the dental calculus was dissolved after 6 minutes.

Accordingly, for this additional reason, the rejection of record should be withdrawn.

(2) Response To Obviousness Rejection Based Upon Zhu In View Of Melman

With respect to the obviousness rejection based upon Zhu in view of Melman, Applicants respectfully submit that the rejection is without appropriate basis and does not establish a *prima facie* case of obviousness. Moreover, Applicants submit that even if for the sake of argument a *prima facie* case of obviousness is considered to have been established, Applicants' showing of unexpected results overcomes any *prima facie* case of obviousness.

The rejection contends that generally it is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose; the idea of combining them flows logically from their having been individually taught in the prior art. It is contended that that it would have been obvious to one of ordinary skill in the art to have used the acid in the compositions of the primary reference motivated by the desire to add to the antibacterial function of the polyphenol, as disclosed by the secondary reference.

In response, Applicants submit that Zhu is directed to an oral composition comprising an effective amount of tea polyphenol; an effective amount of a buffering agent; from about 40% to about 99% of one or more aqueous carriers; and a total water content of from about 5% to about 20%. Zhu does not teach or suggest the inclusion of glycolic acid. Zhu merely discloses the inclusion of various buffering agents beginning at the bottom of page 8.

The rejection attempts to overcome the deficiencies of Zhu by referring to the disclosure of glycolic acid in Melman. However, Melman's preferred active ingredient is acetic acid. Melman does disclose glycolic acid in a lengthy list of acids in paragraph [0017]; however, there does not appear to be any disclosure in Melman of glycolic acid being used in an example.

Therefore, even if for the sake of argument one having ordinary skill in the art would have combined the disclosures of Zhu and Melman, there is no teaching or suggestion in the disclosures to have combined polyphenol with glycolic acid, especially when Melman does not even appear to disclose an exemplary use of glycolic acid which is merely listed in his lengthy list of possible acids other than his preferred acetic acid.

Accordingly, a *prima facie* case of obviousness has not been established. However, even if for the sake of argument a *prima facie* case of obviousness has been established, unexpected results associated with Applicants' claimed subject matter are further evidence of patentability of Applicants' claimed subject matter.

As noted above, Applicants have submitted herewith a Declaration Under 37 C.F.R. 1.132 by one of the inventors, Kazuhiro ONO, which shows the unexpected advantages associated with the recited combination of polyphenol and glycolic acid as compared to the individual use of polyphenol and glycolic acid.

Accordingly, for this additional reason, the rejection of record should be withdrawn.

(3) Response To Obviousness Rejection Based Upon Melman In View Of Oriza

With respect to the obviousness rejection based upon Melman in view of Oriza, Applicants respectfully submit that the rejection is without appropriate basis and does not establish a *prima facie* case of obviousness. Moreover, Applicants submit that even if for the sake of argument a *prima facie* case of obviousness is considered to be established, Applicants' showing of unexpected results overcomes any *prima facie* case of obviousness.

In this ground of rejection, the Examiner is contending that it would have been obvious to one of ordinary skill in the art to have used polyphenol extracted from *Perilla fuctescens* as an antibacterial agent in the compositions of the primary reference motivated by the desire to add to the antibacterial function of the acid, as disclosed by the secondary reference.

In response, Applicants once again note that Melman's preferred active ingredient is acetic acid. Melman does disclose glycolic acid in a lengthy list of acids in paragraph [0017]; however, there does not appear to be any disclosure in Melman of glycolic acid being used in an example.

Oriza discloses oral compositions containing an extract of seeds or leaves of *Perilla Frutescens crispa* or *Perilla ocimoides*.

Even if for the sake of argument one having ordinary skill in the art would have combined the disclosures of Melman and Oriza, there is no teaching or suggestion in the disclosures to have combined *Frutescens crispa* or *Perilla ocimoides* with glycolic acid, especially when Melman does not even appear to disclose an exemplary use of glycolic acid which is merely listed in his lengthy list of possible acids other than his preferred acetic acid.

Accordingly, a *prima facie* case of obviousness has not been established. However, even if for the sake of argument a *prima facie* case of obviousness has been established, unexpected

results associated with Applicants' claimed subject matter are further evidence of patentability of Applicants' claimed subject matter.

As noted above, Applicants have submitted herewith a Declaration Under 37 C.F.R. 1.132 by one of the inventors, Kazuhiro ONO, which shows the unexpected advantages associated with the recited combination of polyphenol and glycolic acid as compared to the individual use of polyphenol and glycol acid.

Accordingly, for this additional reason, the rejection of record should be withdrawn.

Applicants submit that the prior art of record does not teach or suggest a combination of polyphenol and glycolic acid and/or the advantages associated with such a combination.

Still further, the dependent claims patentably further define Applicants' claimed subject matter and are allowable for at least the reasons set forth in claim 1 and the additional features recited in each dependent claim. Therefore, the rejections of record are without appropriate basis and should be withdrawn.

Accordingly, Applicants respectfully request withdrawal of each of the obviousness rejections.

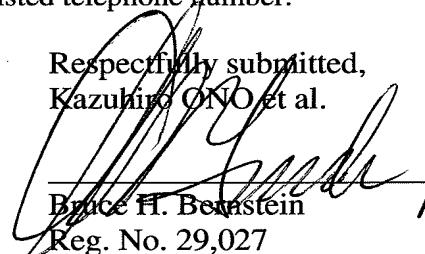
CONCLUSION

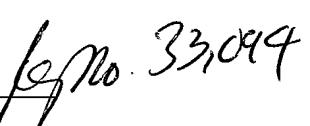
In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections of record, and allow each of the pending claims.

Applicants therefore respectfully request that an early indication of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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